

Jim Moseley's Mini-Hobbies Special



At the 2003 Flying Aces meet, held as usual at Geneseo, several of us noticed a small and attractive little cabin model which was being flown by Jim Moseley. What took our eye particularly was the remarkable stability and consistency of its' performance. Jim would just crank on the turns, and off it went, handling the power burst very well, with a very rapid climb and a smooth transition to a flat but quite fast glide back to ground. Jim is no slouch when it comes to trimming and setting up little rubber models but even considering that, it was apparent that the little airplane was something out of the ordinary.

Also noteworthy was the simplicity of construction. The two panel wing with no center section or curved tips made construction and covering a breeze. The most complicated job looked to be the soldered joint in the landing gear, but for all practical purposes binding the joint with thread and gluing would be adequate for a reproduction..

The design was new to everybody, and as usual on such occasions, we confronted the builder and asked him for details, where the plan might be available, and all the rest of the stuff.

Jim told us that the model was actually a scaled down version from a plan of a float plane that appeared in the British "Hobbies magazine in the 1949/1950 period.. A small size facsimile of the drawing appeared in SAM35 Speaks with the annotation, incorrect as it turns out, that the full sized wing span was 24".

It was the drawing in SAM Speaks that took Jim's eye, and he made some pencil sketch enlargements for a 24" span model, dropping the floats in favor of a wheeled undercarriage. There were a few inconsistent details which surfaced during the process, amongst which were wood sizes larger than usual, what appeared to be excessive dihedral (one of the only dimensions given) and a prop that was pretty generous by contemporary standards for a small duration model like this. Jim reduced the dihedral to a more normal figure, but retained the 9" prop as these days that diameter is by no means unusual on an airplane of this size.

Well, the model was built and flown, and it was only after this that a correction appeared in SAM35 Speaks to the effect that the actual wing span should have been noted as 31-1/2". This, of course, explained the hefty dimensions of the lumber and the large amount of dihedral!

Whatever the size of the original, the reduced size model is one of those happy creations which surface from time to time, and which combine ease of construction with excellent flying properties. It seemed well worth while to draw up the model, using a CAD program to overlay and scale the SAM35 copy to a 24" wingspan model, making adjustments to balsa sizes as seemed reasonable, and retaining the 9" prop. Great care was taken to keep the outlines as accurate as possible. The floats were, of course, replaced by conventional landing gear.

The prop proportions, not shown on the Hobbies drawing, are scaled down from one used by Bob Copland on his 1937 Northern Star. The P/D ratio averages 1.5 and there is a little, about 10%, washout towards the tips. Jim likes the NS prop and uses scaled versions on many of his rubber models.

Every plan drafter likes to tweak things a bit, and the writer is no exception. In this case, however, the contribution has been to show a few additional and optional diagonal braces at the front of the fuselage. This results from the experiences of a couple of nose in crashes recently. The suggested members also help to resist the compressive forces from the wound motor.

A freewheel is required but since so many have their own preference for this it has been left to the choice of the builder. Suggested prop shaft diameter is 3/64". A Gizmo 8" prop and front end assembly would also be very well suited.

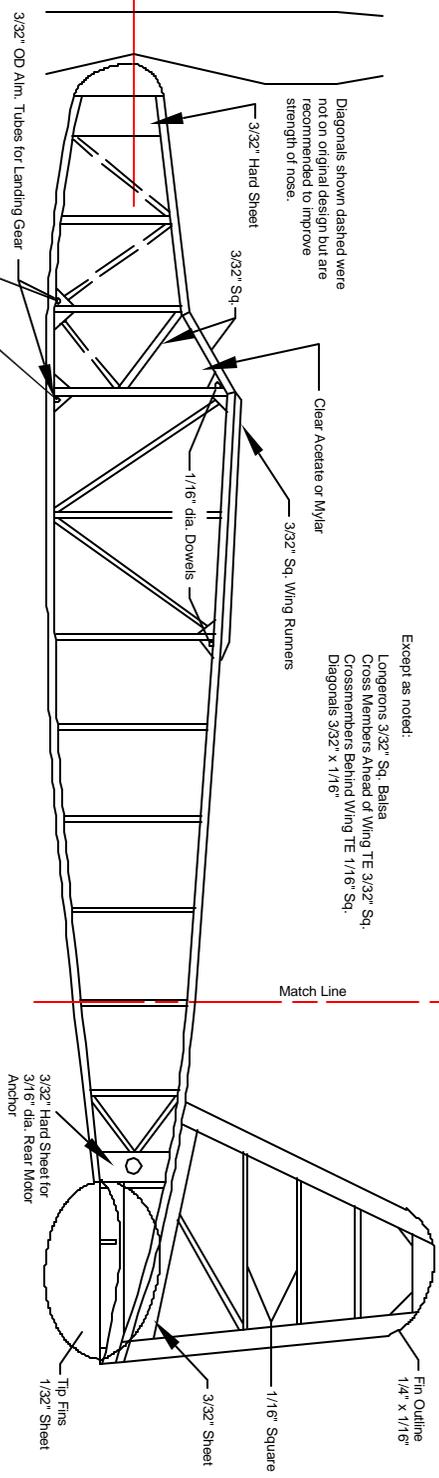
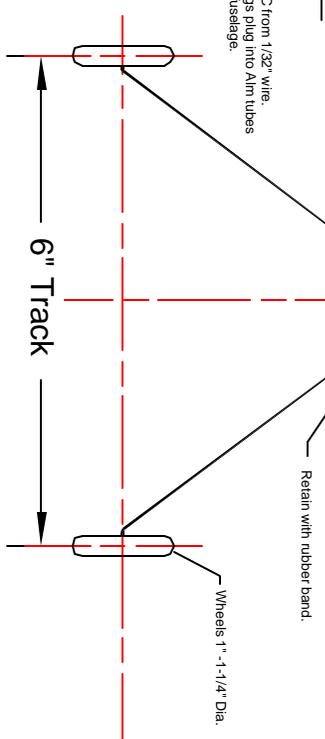
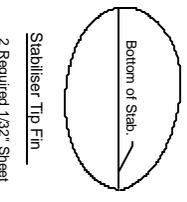
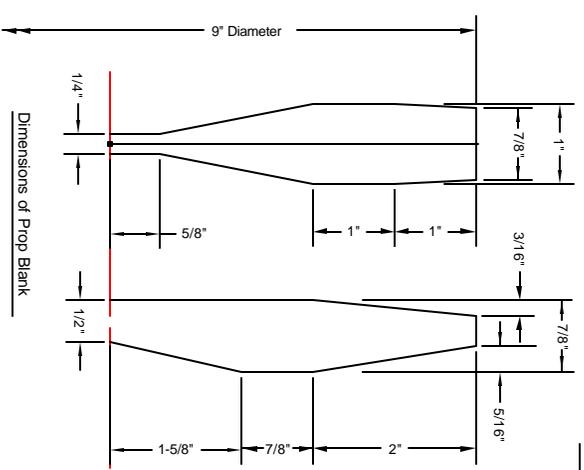
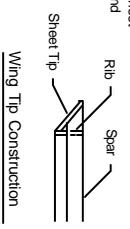
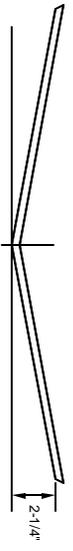
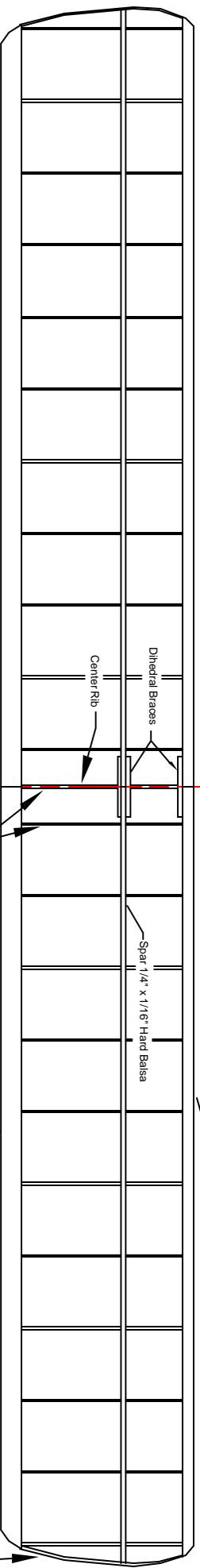
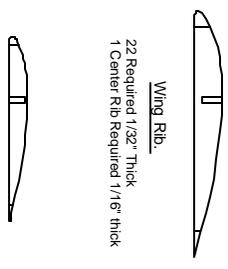
The model has been flown with 5 grams of 4 strands of 3/16" rubber which give a motor a tad over 14" long after prestretching. 6 grams of 1/8" rubber made up into 6 strands has also been used. In both cases a small Crockett hook was employed.

Present airframe weight is 27 grams without hook or rubber, and CG is at 75% of chord (with motor) give or take a fraction.

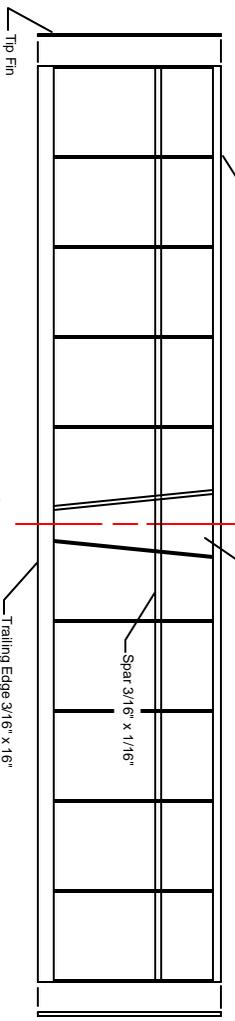
Current trim on Jim's version includes 2mm extra incidence on wing mount, 0.5mm right thrust, and an extra 1mm negative (shim on top of leading edge) on the stab. This may not be applicable to others as it depends on how truly the stabiliser and other components have been installed.

For convenience in downloading and printing, the drawings have been made as a series of sheets which will print on legal size paper. The drawing frames are a constant 7-1/2" by 13", and this should help prospective builders to get a correctly sized plan.

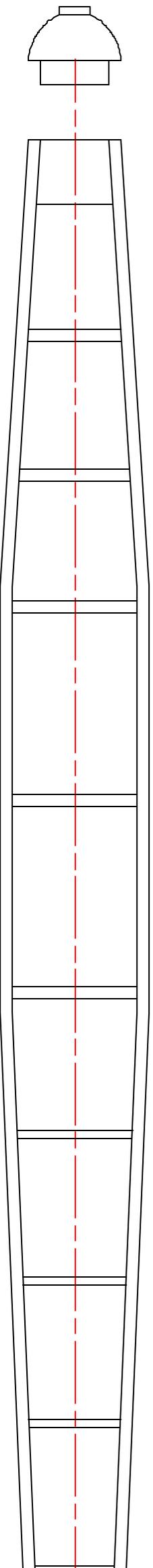
Pete Money
Parsippany, NJ.



Except as noted:
Longerons 3/32" Sq. Balsa
Cross Members Ahead of Wing TE 3/32" Sq.
Crossmembers Behind Wing TE 1/16" Sq.
Diagonals 3/32" x 1/16"



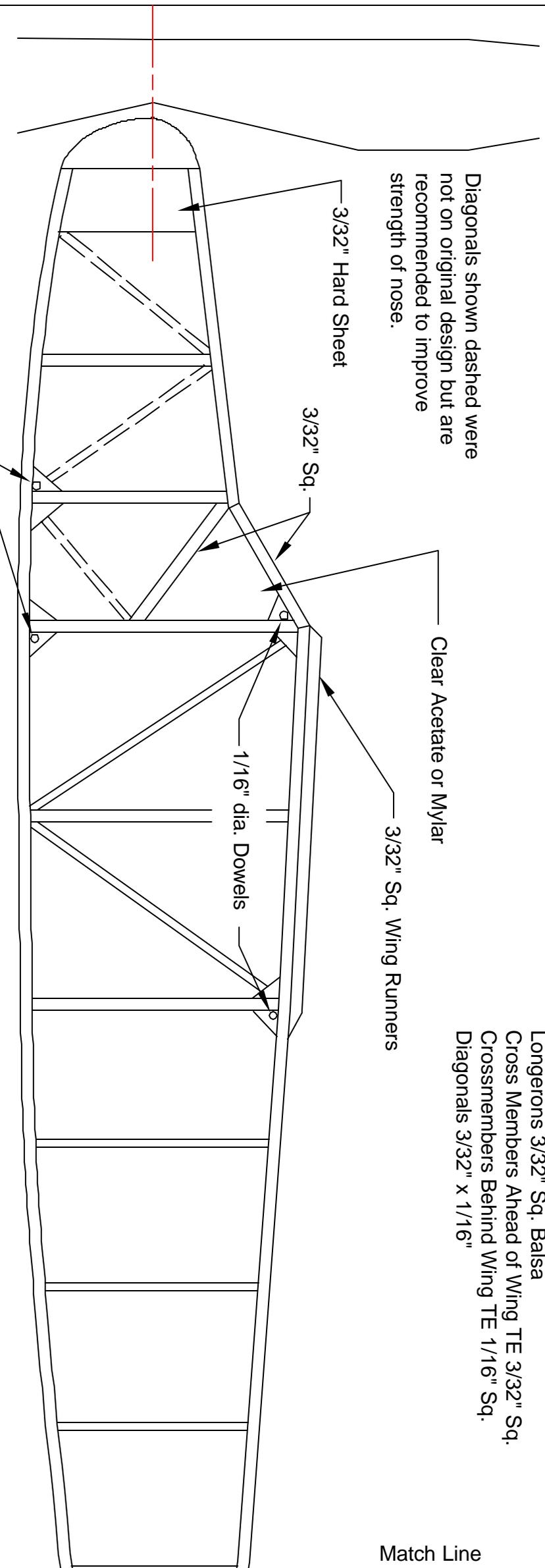
Jim Moseley's "Mini-Hobbies"



Diagonals shown dashed were not on original design but are recommended to improve strength of nose.

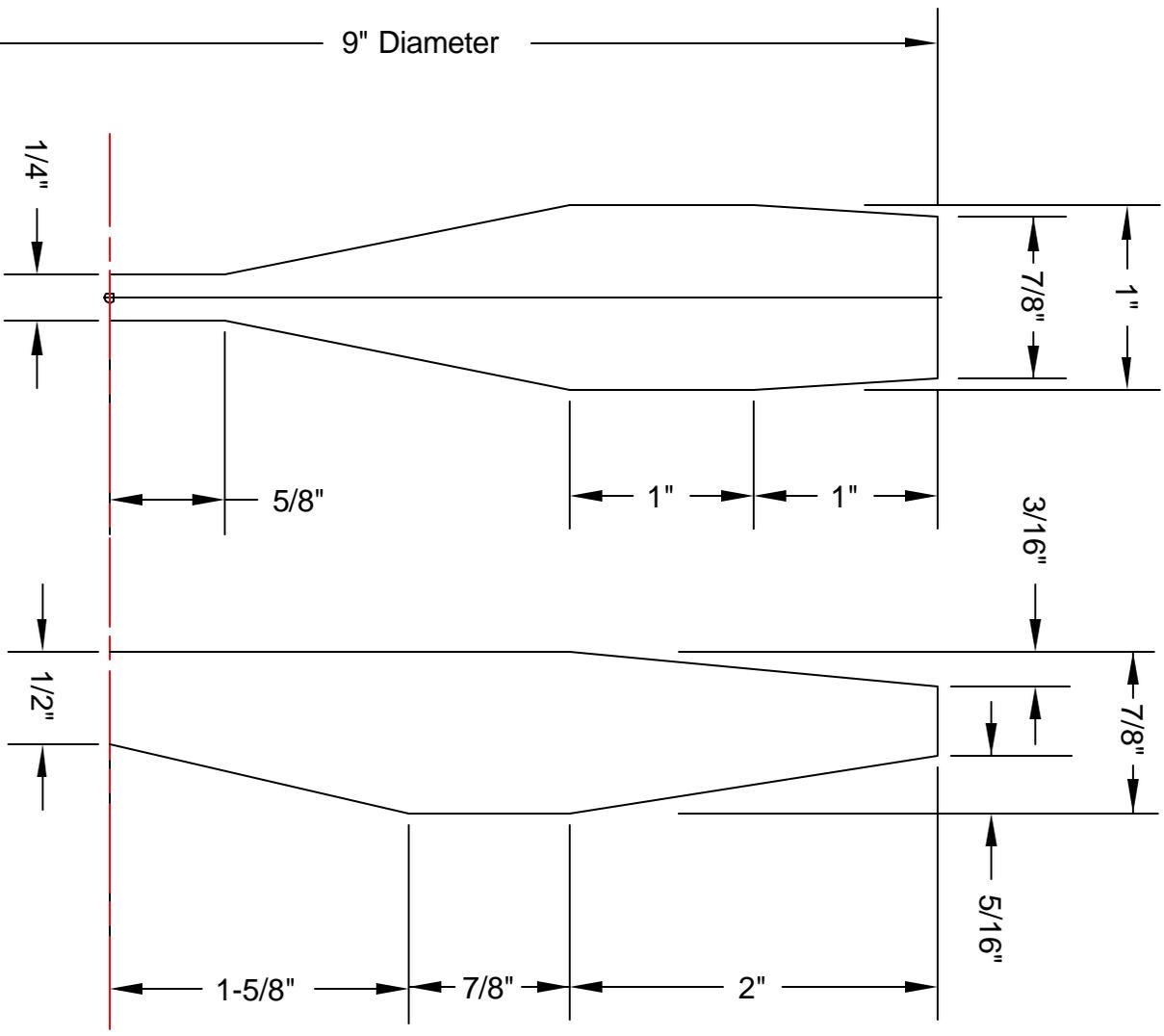
Except as noted:

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- Cross Members Ahead of Wing TE 3/32" Sq.
- Crossmembers Behind Wing TE 1/16" Sq.
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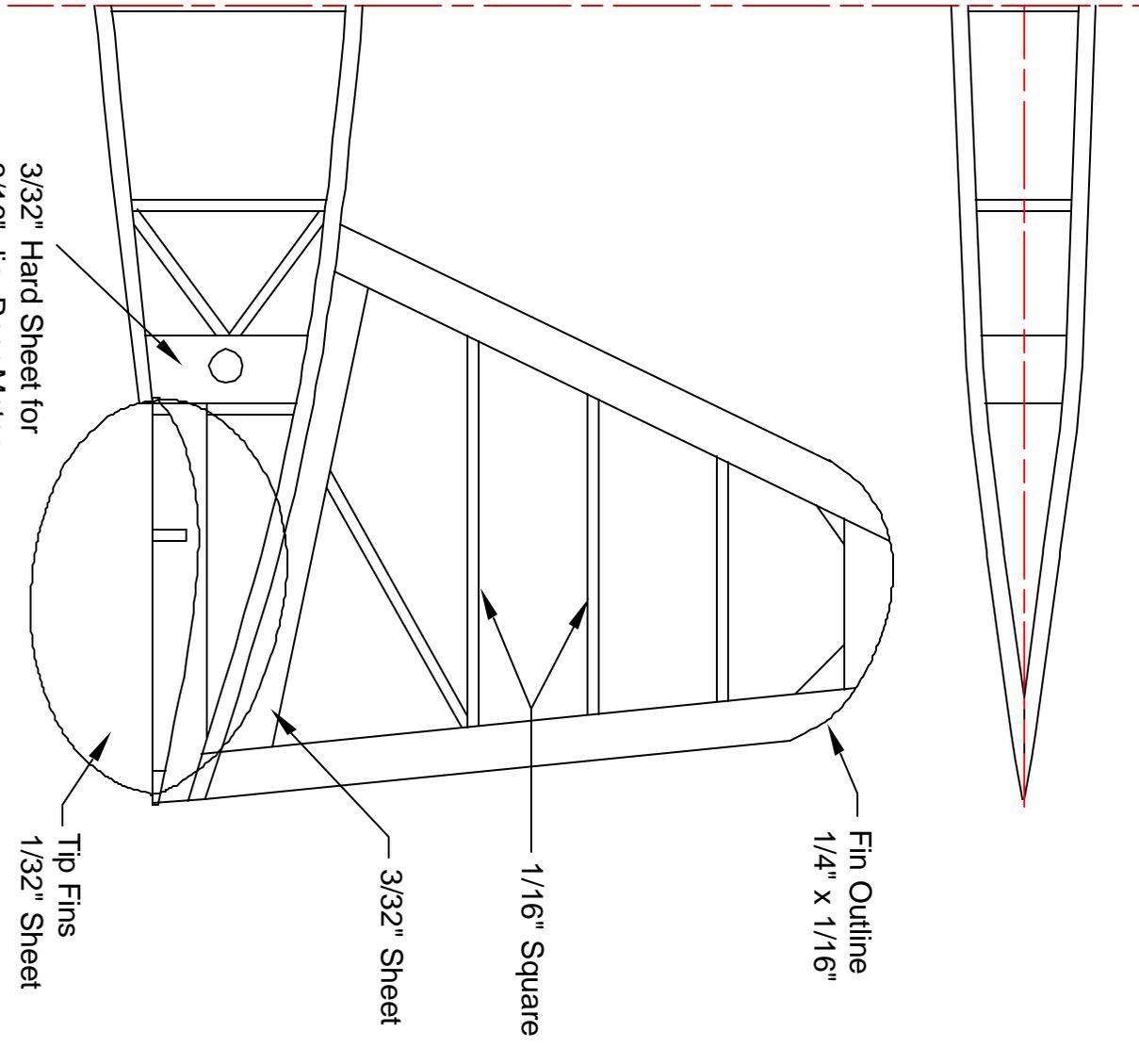


3/32" OD Alm. Tubes for Landing Gear

Match Line



Match Line



Dimensions of Prop Blank

Rear of Fuselage

Frame size 7-1/2" x 13"

Leading Edge 3/16" x 3/16"

Spar 1/4" x 1/16" Hard Balsa

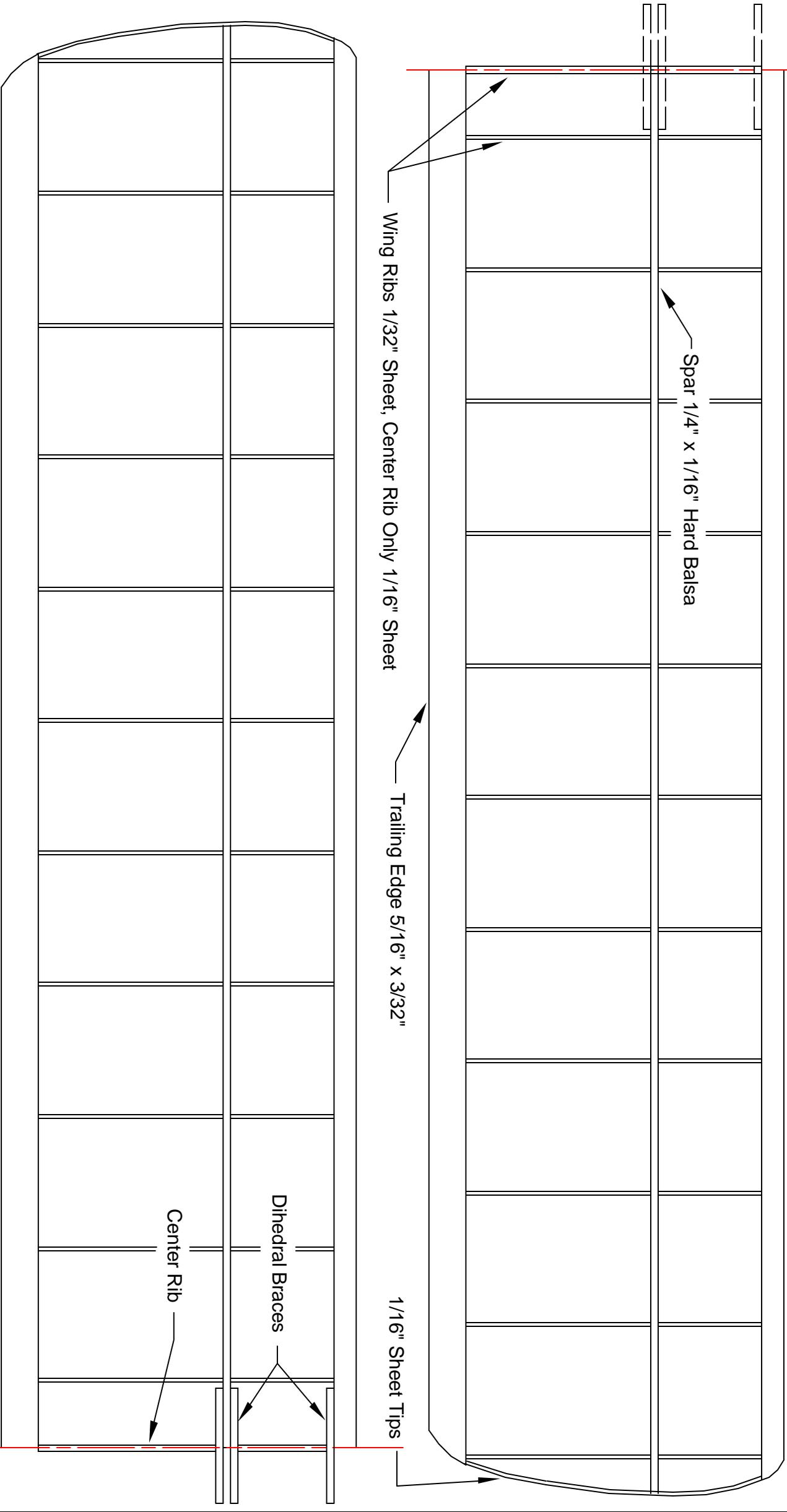
Wing Ribs 1/32" Sheet, Center Rib Only 1/16" Sheet

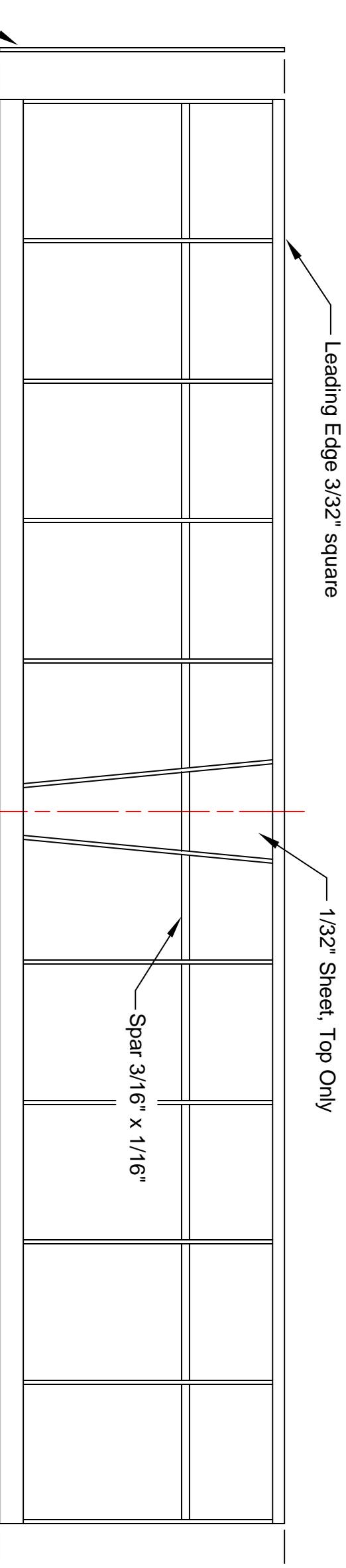
Trailing Edge 5/16" x 3/32"

1/16" Sheet Tips

Dihedral Braces

Center Rib



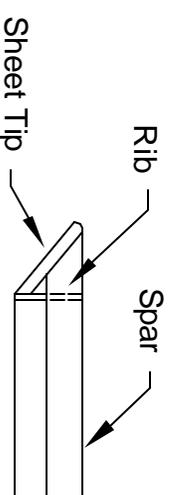


Tip Fin



Stabiliser Rib

12 Required 1/32" Thick

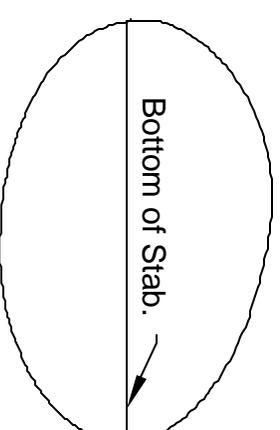


Wing Tip Construction



Wing Dihedral Brace

3 Required Hard 1/16" Sheet
Sand Brace at LE to Blend



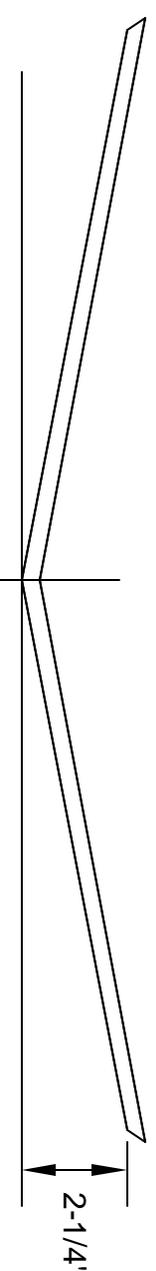
Stabiliser Tip Fin

2 Required 1/32" Sheet



Wing Rib.

22 Required 1/32" Thick
1 Center Rib Required 1/16" thick



Wing Dihedral

